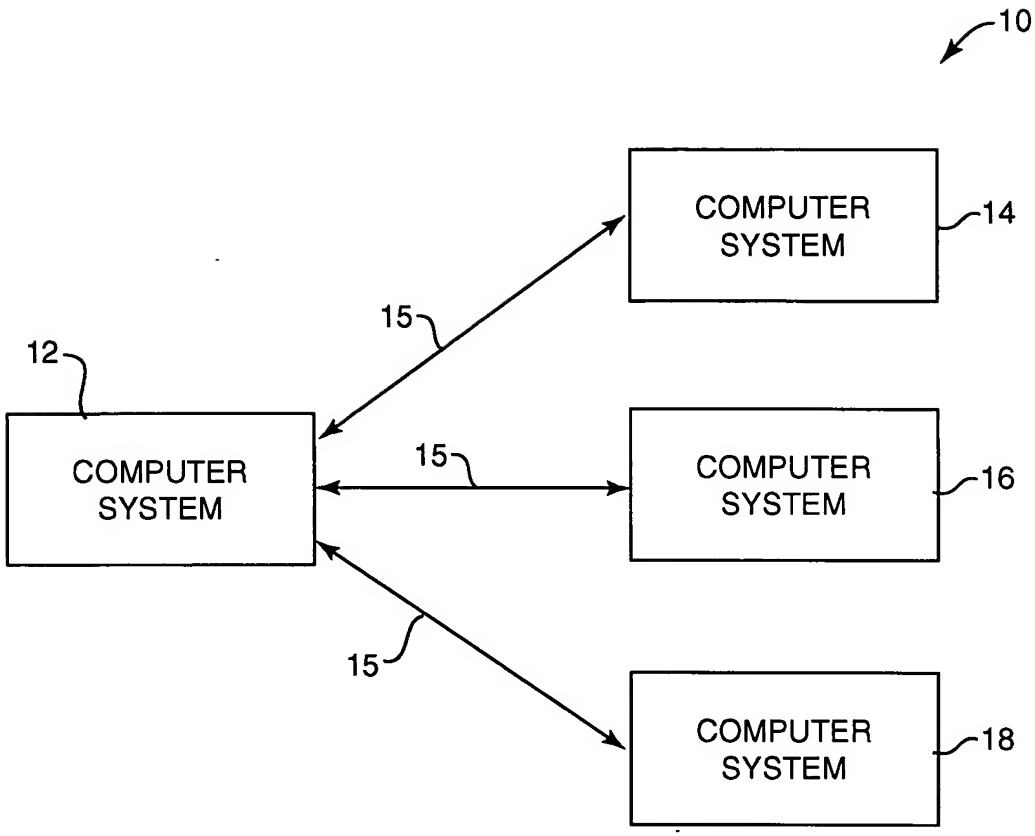
10
COMPUTER SYSTEM
14
15
12
COMPUTER SYSTEM
15
COMPUTER SYSTEM
16
15
COMPUTER SYSTEM
18

FIG. 1

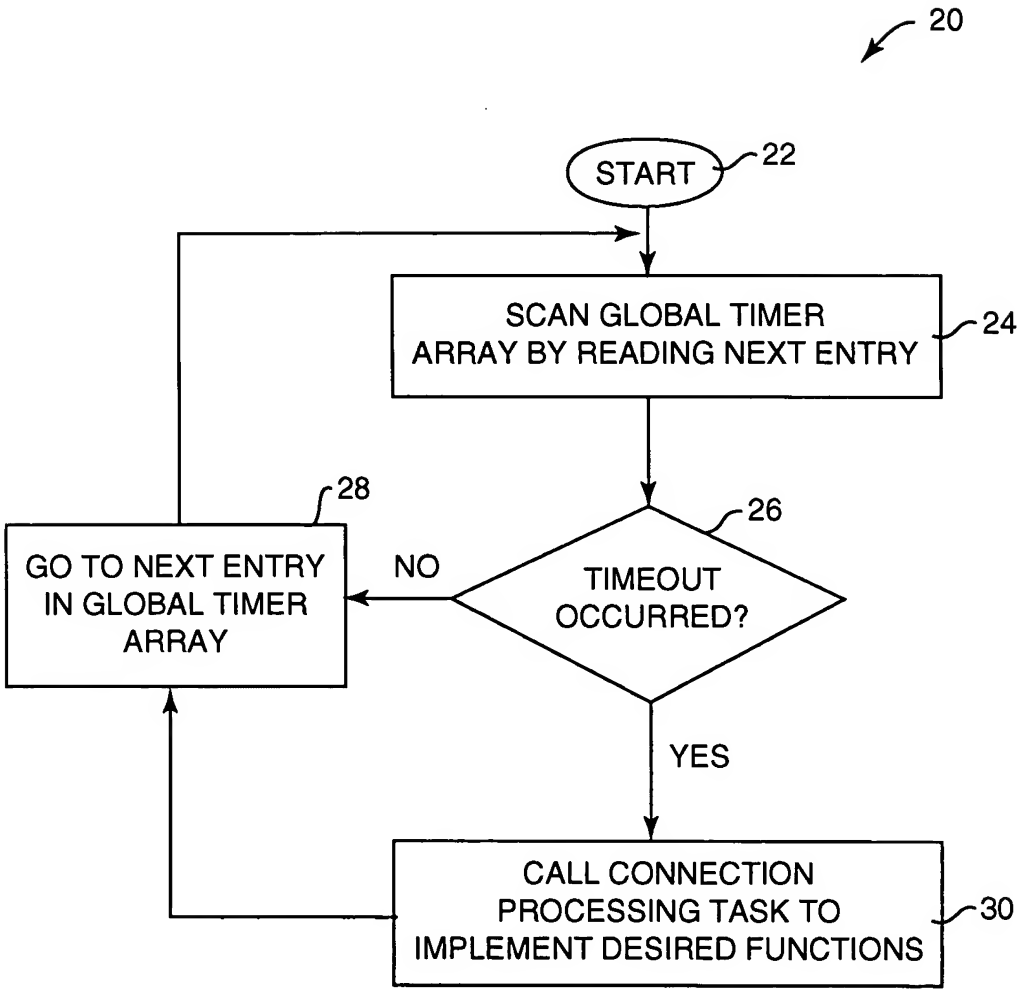
20
START
22
SCAN GLOBAL TIMER ARRAY BY READING NEXT ENTRY
24
TIMEOUT OCCURRED?
26
NO
GO TO NEXT ENTRY IN GLOBAL TIMER ARRAY
28
YES
CALL CONNECTION PROCESSING TASK TO IMPLEMENT DESIRED FUNCTIONS
30

FIG. 2

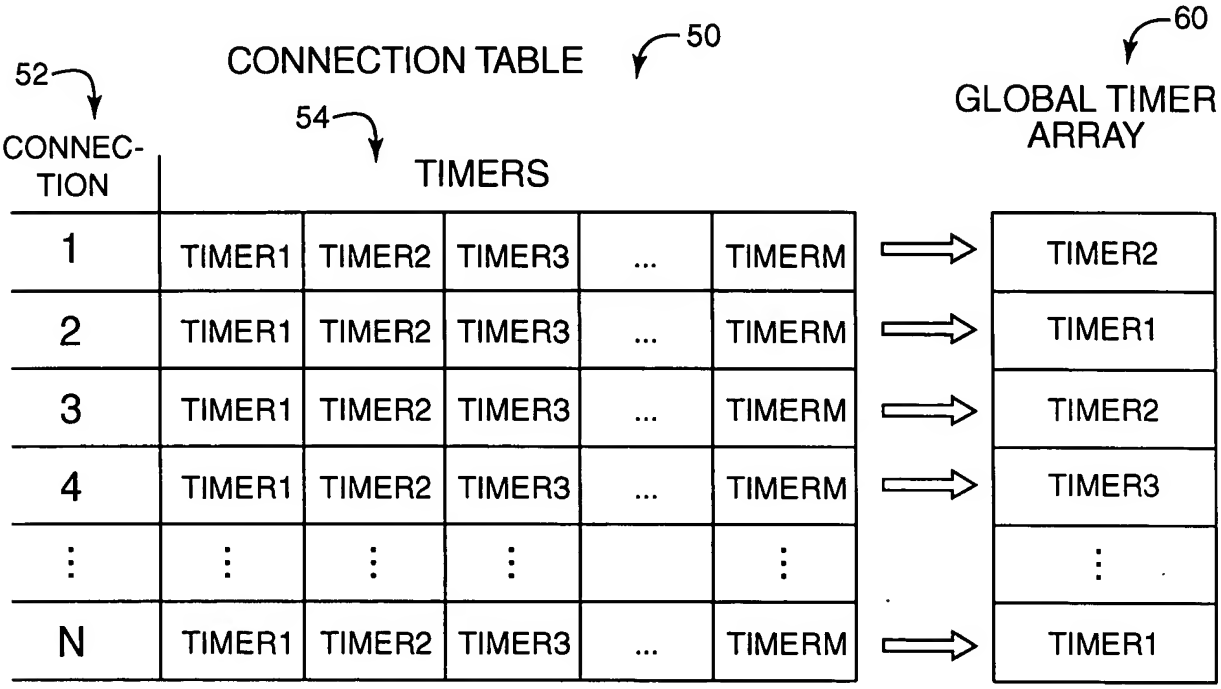
CONNECTION TABLE
50
52
CONNEC-
TION
54
TIMERS
60
GLOBAL TIMER
ARRAY
1
TIMER1
TIMER2
TIMER3
...
TIMERM
TIMER2
2
TIMER1
TIMER2
TIMER3
...
TIMERM
TIMER1
3
TIMER1
TIMER2
TIMER3
...
TIMERM
TIMER2
4
TIMER1
TIMER2
TIMER3
...
TIMERM
TIMER3
N
TIMER1
TIMER2
TIMER3
...
TIMERM
TIMER1

FIG. 3

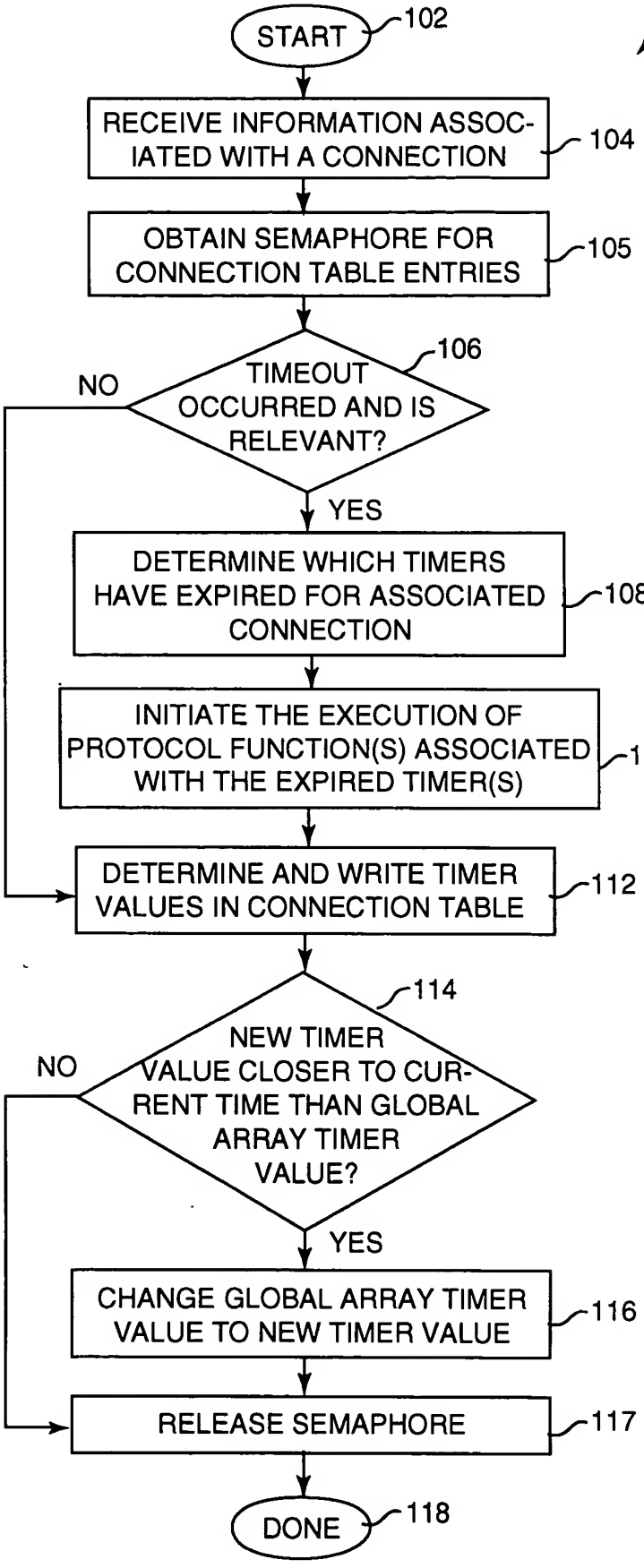
START
102
100
RECEIVE INFORMATION ASSOC-IATED WITH A CONNECTION
104
OBTAIN SEMAPHORE FOR CONNECTION TABLE ENTRIES
105
TIMEOUT OCCURRED AND IS RELEVANT?
106
NO
YES
DETERMINE WHICH TIMERS HAVE EXPIRED FOR ASSOCIATED CONNECTION
108
INITIATE THE EXECUTION OF PROTOCOL FUNCTION(S) ASSOCIATED WITH THE EXPIRED TIMER(S)
110
DETERMINE AND WRITE TIMER VALUES IN CONNECTION TABLE
112
NEW TIMER VALUE CLOSER TO CUR-RENT TIME THAN GLOBAL ARRAY TIMER VALUE?
114
NO
YES
CHANGE GLOBAL ARRAY TIMER VALUE TO NEW TIMER VALUE
116
RELEASE SEMAPHORE
117
DONE
118

FIG. 4

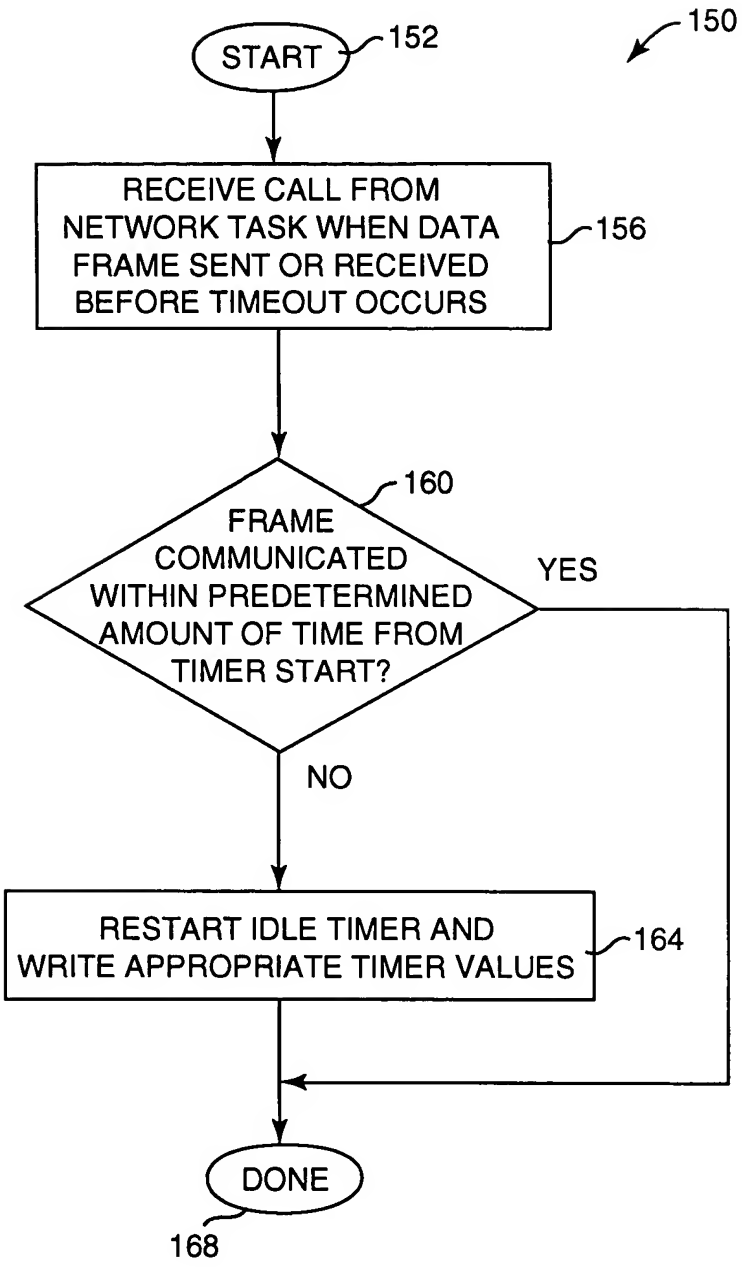
150
START
152
RECEIVE CALL FROM NETWORK TASK WHEN DATA FRAME SENT OR RECEIVED BEFORE TIMEOUT OCCURS
156
160
FRAME COMMUNICATED WITHIN PREDETERMINED AMOUNT OF TIME FROM TIMER START?
YES
NO
RESTART IDLE TIMER AND WRITE APPROPRIATE TIMER VALUES
164
DONE
168

FIG. 5